

REMARKS

Claims 1-6, 15 and 16 are pending in this application. Claims 7-14 have been cancelled without prejudice or disclaimer.

The application contains claims 7-14 drawn to a non-elected invention (Office action paragraph 1).

Claims 7-14 are cancelled without prejudice or disclaimer.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as unpatentable over PL 115725 (Kozlowski et al.), JP 2000015476 (Matsumoto et al.), or Arai et al. (1999 article), or Ogashiwa et al. (U.S. Pat. No. 6,160,224) in view of JP 409260427 (Akamatsu et al.) (Office action paragraphs 4-5).

Reconsideration of the rejection of claims 1-6 is respectfully requested.

Regarding Applicants' arguments that none of the references discloses the recited range of Sn alloy composition (page 3 of the Amendment of June 26, 2002), the Examiner now states that "Overlapping ranges have been held to be a prima facie case of obviousness." The Examiner cites *In re Wertheim*: "the disclosure in the prior art of any value within a claimed range is an anticipation of that range."

The Examiner is correct that overlapping ranges can allow for obviousness (MPEP 2144.05), and Applicants have previously noted this point with regard to the disclosures in Koslowski et al.,

Matsumoto et al. and Arai et al. for the recited ranges of Sn and Ag.. However, Applicants note that the cited line from *In re Wertheim* refers specifically to **anticipation** of a range by a disclosed **value** within the range. Applicants submit that there are no examples in the references with values consistent with the claimed ranges.

With regard to Ogashiwa, Applicants noted in the Amendment dated June 26, 2002, that there is overlap in the disclosed ranges **only** when Ag is selected rather than In and when Pb, disclosed as 0-70%, is limited to less than 8%, if the Ni/Fe content is 0.02%. That is, in addition to the fact that overlap of the recited range and Ogashiwa's disclosure occurs only over a small fraction of a disclosed range, **this overlap would require a selection of Ag rather than In in Ogashiwa.** Applicants therefore respectfully submit that Ogashiwa cannot be considered to suggest the recited ranges of the present claims.

Applicants also submit that Akamatsu et al. does not at all suggest the compositional ranges in claim 1. The Examiner now argues that Akamatsu's disclosure of using "an element having an atomic number smaller than 81" is a suggestion for Ag (point 12 of the Office action). However, there are 80 elements of atomic number smaller than 81, many suitable for making alloys with Sn, and Applicants submit that such a broad disclosure cannot be considered to provide a proper suggestion for the specific recitation of Ag. Moreover, the disclosure does not provide a suggestion for the specific Ag and Sn ranges in claim 1.

In addition to the above arguments, claim 1 also has a limitation on the amount of α -rays that is not taught in the references. In order to provide a *prima facie* case of obviousness, there must be a suggestion for this limitation as well. As Applicants noted in the Amendment, Kozlowski et al.,

Matsumoto et al., Arai et al. and Ogashiwa et al. do not disclose this limitation, and Applicants submit that this limitation is also not suggested by these references.

The only relevant reference in regard to this limitation would appear to be Akamatsu et al. JP'427, and Applicants maintain their argument that Akamatsu et al. does not suggest the specific limitation of <0.01 cph/cm². It is true that Table 1 of JP'427 lists values of <0.1 cph/cm², and that this could be considered as a range from 0.1 to zero, which encompasses the claimed range.

However, Applicants submit that the upper limit value of 0.1 cph/cm² in Akamatsu et al. cannot be taken as suggesting the upper limit value of 0.01 cph/cm² in the present claims, which is one-tenth that in the reference.

Moreover, the only way to combine the references to produce the recitation of claim 1 would be to state that Akamatsu's disclosed range of <0.1 cph/cm² suggests the claimed range of 0.01 cph/cm² or less, and to then apply Akamatsu's teaching to Koslowski et al., Matsumoto et al. or Arai et al., and then to state that the recited limitations on Ag and Sn contents, not disclosed in those references, were suggested by the disclosed ranges in these references. Applicants assert that there is no motivation for this combination, and that such a combination requires picking and choosing of particular limitations from the references in a manner that requires considerable hindsight.

Applicants therefore respectfully assert that the combination of limitations of the present claims is not suggested or motivated by the cited references, and that claims 1-6 are novel and non-obvious over Kozlowski et al., Matsumoto et al., Arai et al., Ogashiwa et al., and Akamatsu et al. taken separately or in combination.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over PL

Amendment under 37 CFR 1.116
Kozo SHIMIZU et al.

U.S. Patent Application Serial No. 09/731,726
Attorney Docket No. 001616

115725 (Kozlowski et al.), JP 2000015476 (Matsumoto et al.), or Arai et al. (1999 article), or Ogashiwa et al. (U.S. Pat. No. 6,160,224) in view of JP 409260427 (Akamatsu et al.) as applied to claims 1-6, and further in view of Bult et al. (U.S. Patent No. 4,690,725) (Office action paragraph 6).

Reconsideration of the rejection of claims 15-16 is respectfully requested. Applicants have argued above that independent claims 1 and 4, from which claims 15 and 16 respectively depend, are novel and non-obvious over Kozlowski et al., Matsumoto et al., Arai et al., Ogashiwa et al. and Akamatsu et al. Applicants submit that Bult et al. does not provide a further suggestion or motivation for the limitations of claims 1 and 4 that are not found in those references, and that claims 15 and 16 are therefore novel and non-obvious over Kozlowski et al., Matsumoto et al., Arai et al., Ogashiwa et al., Akamatsu et al. and Bult et al., taken separately or in combination.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.


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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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